

## **LEAKAGE DETECTING METHOD FOR USE IN OXIDIZING SYSTEM OF FORMING OXIDE LAYER**

### **ABSTRACT OF THE DISCLOSURE**

Embodiments of the present invention are directed to providing a leakage detecting method for use in an oxidizing system of forming an oxide layer so as to shorten leakage detecting time period. In one embodiment, a leakage detecting method for use in an oxidizing system of forming an oxide layer comprises performing oxidizing processes on a plurality of test wafers in a plurality of test runs under a specified operating condition in an oxidizing system having an oxidizing chamber to form oxide layers on the test wafers having a plurality of oxide thicknesses for the plurality of test runs by flowing an oxidizing gas through the oxidizing chamber containing the test wafers. An oxygen concentration of the oxidizing gas exiting the oxidizing chamber is measured in each of the plurality of test runs. The method further comprises obtaining a correlation between the measured oxygen concentrations and the oxide thicknesses for the plurality of test runs to identify a threshold oxygen concentration corresponding to a maximum acceptable oxide thickness. An oxygen concentration greater than the threshold oxygen concentration indicates gas leakage in the oxidizing system.

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